

## **Palodent Sectional Matrix System (Project 98-24) (09/02)**

The Palodent Sectional Matrix System is designed to be used for the placement of posterior resin composite restorations. A number of problems have been associated with using resin composite for posterior restorations, including staining, marginal ditching, post-operative sensitivity, increased wear compared to metallic restorations, and difficulties in obtaining adequate interproximal contacts. In an effort to overcome this latter problem, Darway, Inc. has introduced the Palodent Sectional Matrix System. This system consists of one size of contoured sectional matrix bands and a "BiTine" ring. The purpose of the BiTine ring is two-fold: 1) to apply an interproximal wedging force to enhance contact formation and 2) to aid in the proximal contouring of the restoration. The procedure for using the Palodent Sectional Matrix System for a Class II resin composite restoration is the following: apply the BiTine ring interproximally between the tooth to be prepared and the adjacent tooth pre-operatively for initial separation; after completion of the preparation the BiTine ring is removed; the sectional matrix and wedge are applied; the matrix is burnished against the adjacent tooth; compound is added to the BiTine ring tines and replaced; and the resin composite restoration is placed. The Introductory Kit contains four BiTine rings, sectional matrices, and a VHS instructional video.



### **Manufacturer:**

Darway, Inc.  
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### **Suggested Retail Price:**

\$46.95 4 BiTine rings, sectional matrices, instructional video

### **Government Price:**

Same as above

### **ADVANTAGES:**

- + Well-organized packaging.
- + Excellent instructional video that gives detailed instructions on product use.
- + Provides pre-placement wedging as well as matrix placement and contouring.
- + Judged by evaluators to provide adequate wedging to ensure good interproximal contact in posterior resin composite restorations.
- + Judged by evaluators to provide better proximal contour for posterior composite restorations than traditional matrices.
- + Easier placement for single proximal surface restoration than circumferential band.

### **DISADVANTAGES:**

- BiTine ring is sometimes awkward to place with rubber dam forceps.
- BiTine ring not stable in all clinical situations and may require additional compound stabilization.
- BiTine ring may be difficult to place if preparation has large facial or lingual extensions.
- BiTine ring difficult to place on either side of wedge; can only be placed occlusal to wedge.
- Better restoration contours may not decrease finishing time because of "too tight" contacts.

### **SUMMARY AND CONCLUSIONS:**

Palodent is a unique sectional matrix system specifically aimed at aiding the clinician in placing posterior resin composite restorations. It provides both wedging and matrix contouring in a single system. The Introductory Kit comes with an excellent instructional video. Evaluators felt that adequate restoration contours and contacts were obtained. If anything, some evaluators felt that contacts obtained were actually too tight and required additional finishing time to reduce the contacts to the appropriate level.

Evaluators judged that the BiTine ring can be awkward to place and is not stable in all clinical situations. Overall, the evaluators were satisfied with the system as a means for placing posterior resin composite restorations, and noted that it provided some advantages over traditional (e.g., Tofflemire) matrices. The **Palodent Sectional Matrix System** is rated **Acceptable** for use by the federal dental services.

**UPDATE** The Palodent System has been modified and is now available from Dentsply/Caulk. The Palodent System from Darway is a sectional matrix used during the placement of amalgam, resin composite, and temporary restorations. The product was evaluated and rated "Acceptable" in DIS 56-14 but additional items are now available to enhance its usefulness. As evaluated, the Palodent System consisted of a "BiTine" ring and one size of sectional matrix. Our evaluation indicated that the ring produced effective pre-placement wedging as well as matrix contouring. It was also judged to provide better proximal contours for posterior resin composite restorations than traditional matrices. One of the problems noted was that the smooth ring was awkward to place with rubber dam forceps. One new addition to the kit has been made to address this difficulty. A new ring, the "BiTine.ii", has two sockets for engaging the forceps. The ring also has a longer loop that Darway claims improves visibility. The other change to the kit is the addition of two different sizes of matrix: one is smaller for restorations in primary teeth and the other is larger for deep restorations. The Master's Kit version of the system (item number MK301) contains 4 BiTine rings, 2 Bitine.ii rings, 100 standard matrices, 50 mini-matrices, and 50 Palodent Plus (ie, large) matrices.